



WEDNESDAY, FEBRUARY 7, 2007 (1:00–3:30 PM)

WWW.EPA.GOV/IAQ/CIAQ/INDEX

~ MEETING MINUTES ~

NEXT MEETING OF THE CIAQ: WEDNESDAY, JUNE 6TH 2007 (1:00–3:30 PM)

THESE MINUTES INCLUDE: (A) THE FINAL AGENDA; (B) THE TEXT OF THE MEMBER AGENCY UPDATES; AND (C) INFORMATION ON THE PRESENTATIONS (COPIES).

A. AGENDA

TELECONFERENCE: 1-866-299-3188, ACCESS CODE 3439431#

WELCOME AND INTRODUCTIONS: EPA Co-CHAIR, TOM KELLY

UPDATES FROM CIAQ MEMBER DEPARTMENTS & AGENCIES

1-NIST, NATIONAL INSTITUTE FOR STANDARDS & TECHNOLOGY, ANDY PERSILY

2-CPSC, CONSUMER PRODUCT SAFETY COMMISSION, JOANNA MATHESON

3-DOE, DEPARTMENT OF ENERGY, TERRY LOGEE

3.1 AIR CLEANING W/UVPCO W/A CHEMISORBENT; TESTING OF
RESIDENTIAL AIR CLEANERS

4-HUD, HOUSING & URBAN DEVELOPMENT, PETER ASHLEY

5-GSA, GENERAL SERVICES ADMINISTRATION, DAVID MARCINIAK

5.1 UPDATE ON GSA'S IEQ PROGRAM

6-EPA, ENVIRONMENTAL PROTECTION AGENCY, TOM KELLY

6.1 EPA MOISTURE CONTROL GUIDANCE FOR PUBLIC AND COMMERCIAL
BUILDINGS

6.2 ASHRAE ADVANCED IAQ DESIGN GUIDE (FOR NONRESIDENTIAL
BUILDINGS)

6.3 ENERGYSTAR NEW HOMES W/IAQ PACKAGE

NOTE: ITEMS 6.1 – 6.3 PRESENTED BY ERIC WERLING, EPA/IED

7-GENERAL CIAQ ITEMS, PHIL JALBERT, EPA

FILTRATION - POSSIBLE DISCUSSION TOPIC FOR THIS OR THE NEXT MEETING.

PROPOSED PRESENTATION FOR JUNE 6TH MEETING: *REDUCED ENERGY USE THROUGH REDUCED INDOOR CONTAMINATION IN RESIDENTIAL BUILDINGS*, NCEMBT, NOVEMBER 2006.

PRESENTATIONS:

(1) NIBS INDOOR ENVIRONMENTAL QUALITY REPORT. PRESENTER: NANNE DAVIS ELIOT, NIBS PROJECT MANAGER (202-289-7800, EXT.125, NELIOT@NIBS.ORG).

(2) NASA TO STRENGTHEN THE INDOOR HEALTH AND PRODUCTIVITY COMPONENT OF ITS "SUSTAINABILITY" COURSE FOR FACILITIES STAFF. PRESENTER: BILL BRODT, NASA FACILITIES ENGINEERING/REAL PROPERTY DIVISION, (202-358-1117, WBRODT@NASA.GOV).

B. DEPARTMENT & AGENCY UPDATES

1-NIST, NATIONAL INSTITUTE FOR STANDARDS AND TECHNOLOGY

(POC: ANDY PERSILY, ANDYP@NIST.GOV, 301 975-6418)

1.1-EMISSIONS TESTING STANDARDS FOR VOLATILE ORGANIC COMPOUNDS: NIST IS WORKING ON A PROJECT TO DEVELOP STANDARD REFERENCE MATERIALS AND ASSOCIATED MEASUREMENT TECHNIQUES FOR CONSISTENT DETERMINATION OF VOLATILE ORGANIC COMPOUND EMISSIONS FROM INDOOR MATERIALS AND PRODUCTS. A HALF-DAY WORKSHOP RELATED TO THIS EFFORT WAS HELD DURING THE ASTM MEETING IN OCTOBER 2006 WITH REPRESENTATIVES FROM SEVERAL STAKEHOLDER GROUPS INCLUDING MANUFACTURERS, EMISSIONS TEST LABORATORIES, LABELING PROGRAMS, AND PURCHASERS.

APPROXIMATELY 45 PEOPLE ATTENDED. THE WORKSHOP TOPICS INCLUDED: DISCUSSING THE STATE OF BUILDING MATERIAL/PRODUCT EMISSIONS TESTING RELIABILITY; DEFINING STAKEHOLDER NEEDS; IDENTIFYING POTENTIAL STRATEGIES TO IMPROVE CONSISTENCY AND ACCURACY OF EMISSIONS TESTING; AND DEFINING SPECIFIC FOLLOW-UP ACTIVITIES FOR NIST, ASTM AND/OR OTHERS. A MORE DETAILED SUMMARY OF THE ASTM/NIST WORKSHOP IS AVAILABLE FROM CINDY REED AT (301) 975-8423, CHREED@NIST.GOV.

A FOLLOW-UP ASTM/NIST WORKSHOP ON IMPROVING THE RELIABILITY OF INDOOR MATERIAL/PRODUCT EMISSIONS MEASUREMENTS IS NOW BEING PLANNED FOR THE NEXT ASTM MEETING AT THE NORFOLK WATERSIDE MARRIOTT IN NORFOLK, VA. THE WORKSHOP IS SCHEDULED FOR MONDAY, APRIL 16, 2007 (1:30 PM TO 5:30 PM) WITH FOLLOW-UP DISCUSSION PRIOR TO THE ASTM D22.05 SUBCOMMITTEE MEETING ON TUESDAY, APRIL 17, 2007 (8:30 AM TO 10:00 AM). THE PURPOSE OF THIS WORKSHOP IS TO PROVIDE UPDATES OF RECENT DEVELOPMENTS AND ACTIVITIES RELATED TO BUILDING MATERIAL/PRODUCT EMISSIONS TESTING RELIABILITY, THE SOURCES OF EMISSION TESTING INCONSISTENCIES, AND POTENTIAL STRATEGIES TO IMPROVE MEASUREMENT RELIABILITY.

SPECIFIC TOPICS FOR DISCUSSION AT THE WORKSHOP INCLUDE AN UPDATE ON REFERENCE MATERIAL DEVELOPMENT FOR PRODUCT CHAMBER TESTING, AN UPDATE ON THE RESULTS OF THE BUSINESS AND INSTITUTIONAL FURNITURE MANUFACTURER'S ASSOCIATION (BIFMA) SPONSORED ROUND ROBIN STUDY, DEVELOPMENTS RELATED TO LABORATORY ACCREDITATION AND PRODUCT LABELING PROGRAMS, AND A STANDARDS DEVELOPMENT PLAN FOR ASTM SUBCOMMITTEE D22.05.

FOR MORE INFORMATION, PLEASE CONTACT CINDY REED AT (301) 975-8423, CHREED@NIST.GOV OR ANDY PERSILY AT (301) 975-6418, ANDREW.PERSILY@NIST.GOV. ADDITIONAL INFORMATION ON THE WORKSHOP AND THE GENERAL ASTM MEETING CAN BE FOUND ON THE ASTM WEBSITE (WWW.ASTM.ORG) UNDER COMMITTEE D22.

1.2-CO EXPOSURE ASSOCIATED WITH EMERGENCY GENERATORS: IN COOPERATION WITH CPSC, NIST IS CONDUCTING A STUDY OF INDOOR CO EXPOSURE ASSOCIATED WITH EMERGENCY GENERATOR OPERATION IN SINGLE-FAMILY DWELLINGS. THE FIRST PHASE OF THE EFFORT INVOLVES WHOLE HOUSE SIMULATIONS OF AIRFLOW AND CONTAMINANT TRANSPORT WITH THE GENERATOR

OPERATING IN AN ATTACHED GARAGE. SUBSEQUENT TASKS WILL INCLUDE SIMULATIONS OF CO ENTRY WITH THE GENERATOR OPERATING OUTSIDE AND EXPERIMENTAL VERIFICATION OF THE SIMULATION RESULTS IN NIST TEST FACILITIES. POC STEVEN EMMERICH, 301-975-6459, STEVEN.EMMERICH@NIST.GOV).

1.3-STRATEGIES TO REDUCE THE SPREAD OF AIRBORNE INFECTIONS IN HOSPITALS: NIST IS CONTINUING ITS STUDY TO DEVELOP GUIDANCE ON THE DESIGN, CONSTRUCTION, COMMISSIONING AND OPERATION AND MAINTENANCE OF HOSPITAL. A REPORT ON EXISTING AND NEW DATA ON INTERIOR ZONE LEAKAGE OF PRESSURE-CONTROLLED ROOMS (E.G., OPERATING ROOMS AND ISOLATION ROOMS) WILL SOON BE COMPLETED. NIST IS HOPING TO COLLABORATE WITH THE VA TO STUDY THE ISSUE OF CREATING ISOLATION SURGE CAPACITY NEEDED FOR PANDEMIC FLU OR OTHER SIMILAR EVENTS. POC STEVEN EMMERICH, 301-975-6459, STEVEN.EMMERICH@NIST.GOV).

ASHRAE STANDARD 62 AND RELATED ISSUES:

SSPC 62.2 VOTED TO WITHDRAW THE PROPOSED ADDENDUM THAT WOULD HAVE DELETED THE CURRENT SECTION ON INFILTRATION CREDIT. THIS WITHDRAWAL WILL GO TO LETTER BALLOT. THE COMMITTEE REJECTED THE ONE PUBLIC REVIEW COMMENT OBJECTING TO THE PROPOSED ADDENDUM TO DELETE THE CURRENT MILD CLIMATE EXCEPTION THAT ALLOWS USE OF WINDOWS AS A SUBSTITUTE FOR MECHANICAL VENTILATION. THIS ADDENDUM WILL MOVE FORWARD TO PUBLICATION. THE COMMITTEE'S PROPOSALS TO INCORPORATE PORTIONS OF THE STANDARD INTO THE INTERNATIONAL RESIDENTIAL CODE WERE NOT ACCEPTED. THE 62.2 COMMITTEE CONTINUES TO WORK ON A COMPANION GUIDELINE AND OTHER ADDENDA TO THE STANDARD.

THE ASHRAE ENVIRONMENTAL HEALTH COMMITTEE IS SETTING UP COMMITTEES TO DEVELOP TWO POSITION DOCUMENTS FOR ASHRAE. THE FIRST IS ON AIRBORNE INFECTIOUS DISEASES AND THE SECOND IS ON UN-VENTED COMBUSTION APPLIANCES. THE COMMITTEE IS ALSO DRAFTING 1-PAGE SUMMARY DOCUMENTS ON SEVERAL EMERGING ISSUES INCLUDING:

- BIOLOGICAL AGENTS IN CONTEXT OF GLOBALIZATION AND PANDEMIC INFLUENZA AND AIRBORNE TRANSMISSION
- PLASTICIZERS
- ENERGY EFFICIENT HUMIDITY CONTROL IN HOT-HUMID CLIMATES
- EMERGING TECHNOLOGIES WITHOUT CLINICAL EVIDENCE OF EFFICACY (AIR CLEANERS, IONIZERS, HUMIDIFIERS)
- INCREASING LITIGATION FOR LEGIONELLOSIS, AND
- BUILDING PRESSURIZATION ISSUES

PLANNING CONTINUES FOR ASHRAE'S IAQ 2007 CONFERENCE SCHEDULED FOR THIS OCTOBER IN BALTIMORE. OVER 100 ABSTRACTS HAVE BEEN SUBMITTED AND ACCEPTANCE NOTIFICATION IS CURRENTLY IN PROGRESS. THE CONFERENCE THEME IS HEALTHY AND SUSTAINABLE BUILDINGS, AND MORE INFORMATION CAN BE FOUND AT WWW.IAQ2007.ORG.

ASHRAE HAS BEGUN WORK ON AN ADVANCED IAQ DESIGN GUIDE UNDER A COOPERATIVE AGREEMENT WITH EPA. THIS EFFORT IS BEING PURSUED AS A JOINT EFFORT WITH AIA, BOMA, SMACNA AND USGBC. THE GOAL OF THE DOCUMENT IS TO PROVIDE GUIDANCE ON BEST PRACTICES FOR ACHIEVING GOOD

IAQ IN COMMERCIAL AND INSTITUTIONAL BUILDINGS. (POC ANDY PERSILY, 301 975-6418, ANDYP@NIST.GOV).

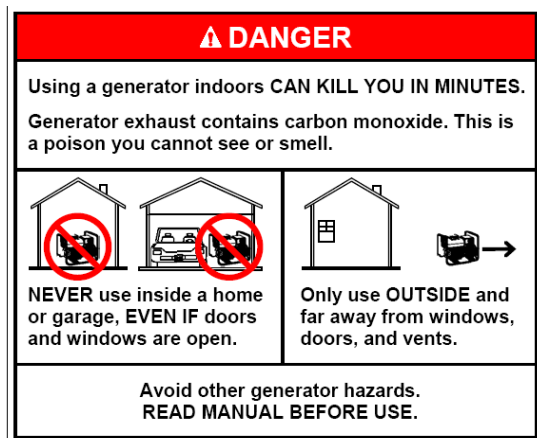
2-CPSC, CONSUMER PRODUCT SAFETY COMMISSION

(POC, JOANNA MATHESON, 301.504.7043, JMATHESON@CPSC.GOV)

2.1-OZONE-GENERATING AIR CLEANERS. CPSC STAFF IS CURRENTLY REVIEWING THE PUBLIC COMMENTS RECEIVED ON THE CONTRACTOR AND STAFF REPORTS. THE COMMENTS RECEIVED FOCUSED ON THE HEALTH EFFECTS OF OZONE AND MODELING. (POC TREYE THOMAS, 301.504.7738).

2.2-DEFINING 'STRONG SENSITIZER'. THE DRAFT TECHNICAL REPORT IS UNDERGOING FEDERAL PARTNER AGENCY REVIEW WHICH WILL BE FOLLOWED BY EXTERNAL PEER REVIEW. NO COMMENTS WERE RECEIVED FROM THE POSTING ON THE AGENCY WEBSITE. (POC JOANNA MATHESON, 301.504.7043).

2.3-PORTABLE GENERATOR SAFETY. CPSC STAFF HAS UNDERTAKEN A THOROUGH REVIEW OF PORTABLE GENERATOR SAFETY WITH PARTICULAR EMPHASIS ON THE CO HAZARD. THE COMMISSION VOTED AND APPROVED ON 1/4/07 TO ISSUE A MANDATORY RULE REQUIRING A CO HAZARD WARNING LABEL ON GENERATORS AND ITS PACKAGING (SEE LABEL BELOW); THIS REGULATION



BECOMES EFFECTIVE 5/14/07. ON 12/5/06 THE COMMISSION VOTED AND APPROVED TO ISSUE AN ANPR TO CONSIDER OTHER STRATEGIES (OTHER THAN LABELS) IN REDUCING THE CO POISONING HAZARD ASSOCIATED WITH PORTABLE GENERATORS; THIS RULEMAKING COULD INCLUDE MANDATORY PERFORMANCE STANDARDS. AS PART OF THE U.S. CONSUMER PRODUCT SAFETY COMMISSION (CPSC) STRATEGIC GOAL TO REDUCE CARBON MONOXIDE POISONING DEATHS, CPSC STAFF IS PARTICIPATING IN DEVELOPMENT OF THE FIRST VOLUNTARY SAFETY STANDARD FOR PORTABLE

GENERATORS, UNDERWRITERS LABORATORIES (UL) 2201, PORTABLE ENGINE-GENERATOR ASSEMBLIES, TO ADDRESS HAZARDS ASSOCIATED WITH THE TYPICAL USE OF THESE PRODUCTS, PRIMARILY ISSUES RELATED TO CO POISONING. ACTIVITIES AND DOCUMENTS RELATED TO THIS PROJECT CAN BE FOUND ON THE CPSC WEBSITE ([HTTP://WWW.CPSC.GOV/VOLSTD/ENGINE/ENGINE.HTML](http://www.cpsc.gov/volstd/engine/engine.html)). (POC JANET BUYER, 301.504.7542).

3-DOE, DEPARTMENT OF ENERGY

(POC: TERRY LOGEE, 202-586-1689, TERRY.LOGEE@EE.DOE.GOV)

3.1-SUMMARY OF DOE'S UVPCO RESEARCH PROJECT

GOAL: THE GOAL IS AN AIR CLEANER SYSTEM THAT WILL ENABLE A 50% REDUCTION IN RATES OF OUTDOOR AIR SUPPLY WITHOUT INCREASING INDOOR VOC CONCENTRATIONS AND WILL CONSUME CONSIDERABLY LESS ENERGY THAN VENTILATION. SUCCESS CRITERIA ARE AS FOLLOWS: THE VOC AIR CLEANING

TECHNOLOGY MUST: A) PROVIDE SUFFICIENT VOC REMOVAL TO COUNTERACT THE VOC CONCENTRATION INCREASES FROM A 50% REDUCTION IN VENTILATION; USE SUBSTANTIALLY (E.G., 50%) LESS ENERGY THAN VENTILATION; AND HAVE A COST, AND SIZE ACCEPTABLE IN THE MARKET. THE NET COST OF VOC AIR CLEANING PER UNIT OF AIR PROVIDED FREE OF IMPORTANT INDOOR GENERATED VOCs MUST BE LESS THAN OR EQUAL TO THE NET COST OF UNIT SUPPLY OF OUTDOOR AIR.

PROJECT DESCRIPTION: THE AIR CLEANING TECHNOLOGY UNDER CONSIDERATION IS AN ULTRA-VIOLET PHOTOCATALYTIC OXIDATION (UVPCO) AIR CLEANER WITH AN UPSTREAM BANK OF PARTICLE FILTERS AND A DOWNSTREAM SODIUM PERMANGANATE CHEMISORBENT. PARTICLE FILTERS, ALREADY USED IN MOST BUILDINGS, CAN EFFICIENTLY AND COST-EFFECTIVELY REMOVE PARTICLES FROM SUPPLY AIRSTREAMS. THE UVPCO SYSTEM EMPLOYS A PHOTOCATALYTIC OXIDATION PROCESS TO REMOVE FROM THE SUPPLY AIR NEARLY ALL TYPES OF MEASURABLE INDOOR-GENERATED VOCs KNOWN TO POSE ODOR OR HEALTH RISKS. HOWEVER, THE UVPCO SYSTEM RESULTS IN THE NET GENERATION OF TWO ALDEHYDES, FORMALDEHYDE AND ACETALDEHYDE, THAT ARE OF CONCERN WITH RESPECT TO HEALTH RISKS. THE SODIUM PERMANGANATE CHEMISORBENT IS REQUIRED TO REMOVE THE TWO ALDEHYDES AND PROVIDES ADDITIONAL OXIDATION OF OTHER VOCs.

THE REQUIRED VOC REMOVAL EFFICIENCY OF THE AIR CLEANER, TO OFFSET A 50% REDUCTION IN OUTDOOR AIR SUPPLY, WILL DEPEND ON THE RELATIVE RATES OF OUTDOOR AIR SUPPLY AND RECIRCULATION. HOWEVER, FOR A TYPICAL BUILDING WITH 20% OUTDOOR AIR IN THE SUPPLY AIR STREAM THAT IS REDUCED TO 10%, THE REQUIRED VOC REMOVAL EFFICIENCY OF THE AIR CLEANER IS ONLY 12.5%. NOTE THAT FOR SOME APPLICATIONS, IT MAY BE ADVANTAGEOUS TO USE AN AIR CLEANER WITH A HIGHER POLLUTANT REMOVAL EFFICIENCY THAT TREATS ONLY A PORTION OF THE SUPPLY AIR STREAM.

RESEARCH CONDUCTED: LAWRENCE BERKELEY NATIONAL LABORATORY (LBNL) HAS CONDUCTED EXTENSIVE LABORATORY RESEARCH ON THE PERFORMANCE OF UVPCO SYSTEMS FROM TWO MANUFACTURERS. THEIR RESULTS APPEAR BELOW.

IN EXPERIMENTS WITHOUT ANY RECIRCULATION OF AIR, LBNL CHALLENGED TWO UVPCO SYSTEMS WITH MIXTURES OF VOCs REPRESENTATIVE OF THE VOCs COMMONLY FOUND IN BUILDINGS, AT REALISTIC INDOOR CONCENTRATIONS AND A RANGE OF FLOW RATES. VOC REMOVAL EFFICIENCIES WERE MEASURED. THESE EXPERIMENTS DEMONSTRATED THAT THE REMOVAL EFFICIENCIES FOR NEARLY ALL MEASURABLE VOCs OF INTEREST WERE MORE THAN ADEQUATE TO OFFSET A 50% REDUCTION IN OUTDOOR AIR SUPPLY. HOWEVER, THE UVPCO SYSTEMS WERE FOUND TO GENERATE FORMALDEHYDE AND ACETALDEHYDE DUE TO INCOMPLETE DECOMPOSITION OF SOME OF THE VOCs IN THE INLET AIR STREAM.

LBNL CONDUCTED EXPERIMENTS TO IDENTIFY THE VOCs THAT LEAD TO ALDEHYDE PRODUCTION DUE TO THEIR INCOMPLETE DECOMPOSITION BY UVPCO. THIS RESEARCH SHOWED THAT ALL OF THE 10 VOCs STUDIED DECOMPOSED PARTLY TO PRODUCE FORMALDEHYDE. IN CONTRAST, ONLY A FEW OF THE 10 VOCs RESULTED IN THE PRODUCTION OF ACETALDEHYDE, WITH ETHANOL BEING THE DOMINANT SOURCE. ACETONE WAS ALSO PRODUCED BUT ACETONE

PRODUCTION IS NOT CONSIDERED TO BE A SIGNIFICANT CONCERN BECAUSE OF THE LOW TOXICITY AND HIGH EXPOSURE GUIDELINE LIMITS FOR ACETONE.

WE PERFORMED EXPERIMENTS IN WHICH THE AIR CLEANER SYSTEM WAS CHALLENGED WITH MIXTURES OF VOCs USING SEVERAL TYPES OF SORBENT MEDIA SCRUBBERS POSITIONED DOWNSTREAM OF THE UVPCO DEVICE. THESE DEVICES WERE OXIDATIVE CHEMISORBENT BASED AND WERE EXPECTED TO BE HIGHLY EFFECTIVE IN ALDEHYDE REMOVAL. THE RESULTS OF THE EXPERIMENTS WITH A SODIUM PERMANGANATE CHEMISORBENT BED DOWNSTREAM OF THE AIR CLEANER WERE VERY ENCOURAGING. THE CONCENTRATION REDUCTION INSIDE THE CHAMBER (SIMULATING A BUILDING) WAS 40% OR HIGHER FOR ALL COMPOUNDS OF SIGNIFICANT CONCERN, INCLUDING FORMALDEHYDE AND ACETALDEHYDE.

UNRESOLVED TECHNICAL ISSUES: DOE BELIEVES THERE ARE FOUR SIGNIFICANT UNRESOLVED TECHNICAL ISSUES. FIRST, THE LIFETIME OF THE CATALYST IN THE UVPCO AIR-CLEANING SYSTEM IS UNKNOWN. EXTENDED OPERATION IN REAL-WORLD SETTINGS IS NECESSARY TO ASSESS CATALYST LIFETIME. SECOND, THERE REMAINS CONSIDERABLE UNCERTAINTY ABOUT THE CONSUMPTION RATES, HENCE LIFETIMES, OF THE CHEMISORBENT MEDIA. EXTENDED OPERATION IN REAL-WORLD SETTINGS WITH SORBENT MEDIA LOCATED DOWNSTREAM OF A UVPCO SYSTEM IS NECESSARY TO QUANTIFY SORBENT MEDIA CONSUMPTION RATES. THIRD, THE RELIABILITY OF THE AIR CLEANING SYSTEM IS NOT KNOWN. AN UNDETECTED SYSTEM FAILURE COMBINED WITH A REDUCTION IN VENTILATION RATES COULD RESULT IN INCREASED INDOOR POLLUTANT EXPOSURES. THERE IS A HUMAN DIMENSION TO THE RELIABILITY ISSUE -- FAILURE TO MAINTAIN AIR CLEANING EQUIPMENT OR REPLACE SORBENT COULD LEAD TO INCREASED POLLUTANT EXPOSURES. THE FOURTH UNRESOLVED TECHNICAL ISSUE IS THAT THE PERFORMANCE OF THE ADVANCED AIR CLEANER SYSTEM HAS YET TO BE PROVEN IN A REAL BUILDING.

FUTURE RESEARCH: DOE IS CONTINUING TO FUND THE UVPCO- CHEMISORBENT AIR CLEANER RESEARCH AT LBNL WITH COST SHARE FROM THE UNITED TECHNOLOGY RESEARCH CENTER. IN THE REMAINDER OF FY 07, LBNL AND UTRC WILL BUILD AND INSTALL A UVPCO-CHEMISORBENT AIR CLEANER IN AN OCCUPIED COMMERCIAL BUILDING TO UNDERGO FIELD TRIALS. LBNL WILL PROVIDE THE RESEARCH PLAN, MONITORING OF ENERGY USE, VOC REMOVAL EFFICIENCY, VOC CONCENTRATIONS IN OCCUPIED SPACES AND OTHER NECESSARY BUILDING CHARACTERISTICS. ADDITIONALLY, LBNL WILL CONDUCT A SURVEY OF THE OCCUPANTS USING A COMPUTER GENERATED SURVEY QUESTIONNAIRE FROM UC BERKELEY. LBNL WILL ANALYZE THE DATA AND WRITE A REPORT.

DURING FY 08, WHILE THE FIELD TRIALS ARE CONCLUDING, LBNL WILL BUILD A SMALL SCALE DUCTED UVPCO-CHEMISORBENT DUCTED SYSTEM AND CONDUCT ADDITIONAL FIELD TRIALS IN A SECTION OF A BUILDING TO DETERMINE THE LIFETIME OF THE CATALYST, LAMPS AND CHEMISORBENT MATERIALS. FINALLY, LBNL WILL CONDUCT A DETAILED LIFE-CYCLE COST ANALYSIS OF THIS PROMISING AIR CLEANING TECHNOLOGY.

4-HUD, HOUSING & URBAN DEVELOPMENT

(POC: PETER ASHLEY, 202-358-0434, PETER_J._ASHLEY@HUD.GOV)

4.1-IPM TRAINING FOR PUBLIC HOUSING AUTHORITIES

THROUGH AN INTERAGENCY AGREEMENT WITH UNITED STATES DEPARTMENT OF AGRICULTURE'S (USDA'S) COOPERATIVE RESEARCH, EDUCATION AND EXTENSION SERVICE (CSREES), PLANT AND ANIMAL SYSTEMS UNIT, USDA'S REGIONAL IPM CENTERS WILL DEVELOP AND DELIVER INTEGRATED PEST MANAGEMENT (IPM) TRAINING TO MAINTENANCE STAFF, MAINTENANCE SUPERVISORS AND RESIDENTS IN 12 PUBLIC HOUSING AUTHORITIES ACROSS THE COUNTRY.

THIS TRAINING WILL BE DESIGNED TO MOTIVATE MAINTENANCE STAFF TO ADOPT A PRACTICAL AND SAFE APPROACH TO PEST CONTROL BY USING STICKY TRAPS, PUTTING AWAY FOOD, SEALING CRACKS AND CREVICES, RATHER THAN APPLYING PESTICIDES OR USING FOGGERS. THESE TRAININGS WILL BE AVAILABLE BY SATELLITE AND DVD FOR DISTRIBUTION TO FEDERAL PARTNERS, INTERESTED ORGANIZATIONS AND THE GENERAL PUBLIC. (POC: EMILY WILLIAMS, OHHLHC, 336.547.4002, x2067).

4.2-AMERICAN HEALTHY HOMES SURVEY (AHHS) (JOINT HUD/EPA PROJECT)

THE AHHS, A FOLLOW-UP TO THE NATIONAL SURVEY OF LEAD AND ALLERGENS IN HOUSING (NSLAH) CONDUCTED FROM 1997 THROUGH 2000, IS AIMED AT MONITORING THE CHANGE IN LEVEL OF HEALTH HAZARDS IN HOMES OVER TIME AND IN REFINING ITS UNDERSTANDING OF CERTAIN PATTERNS IDENTIFIED IN THE NSLAH. OF PARTICULAR INTEREST ARE LEAD-BASED PAINT HAZARDS, ARSENIC IN DUST AND SOIL, ALLERGENS, ENDOTOXIN AND FUNGI IN DUST, AND PESTICIDE RESIDUES. DATA COLLECTION WAS COMPLETED IN EARLY SPRING OF 2006.

A TOTAL OF 1134 DWELLING UNITS, A REPRESENTATIVE SAMPLE OF U.S. HOUSING, WERE RECRUITED AND SAMPLED. THE EPA HAS COMPLETED ANALYSIS OF VACUUM DUST SAMPLES FOR MOLD USING QUANTITATIVE POLYMERASE CHAIN REACTION (PCR) METHODS AND AN "ENVIRONMENTAL RELATIVE MOLDINESS INDEX (ERMI)" VALUE WAS DERIVED FOR EACH SAMPLE BASED ON CONCENTRATIONS OF 39 MOLD SPECIES. A SIMILAR INDEX VALUE WAS ALSO CREATED USING A SUBSET OF 19 MOLD SPECIES AND WAS FOUND TO CORRELATE WELL WITH THE ERMI RESULTS. A PAPER WITH THESE RESULTS HAS BEEN DRAFTED AND SUBMITTED FOR PUBLICATION.

POC: EUGENE PINZER, HUD/OHHLHC: 202.402.7685

DR. PETER ASHLEY, HUD/OHHLHC: 202.402.7595

DR. STEVE VESPER, EPA/ORD: 513.569.7367

(MOLD PCR ANALYSIS/ERMI INDEX)

DR. KAREN BRADHAM, EPA/ORD: 919.541.9414 (PESTICIDES, ARSENIC)

4.3-RESIDENTIAL MOISTURE STUDY (POC: MIKE BLANFORD, 202.402.5728)

THE HUD OFFICE OF POLICY DEVELOPMENT & RESEARCH (PD&R) IN "BUILDING MOISTURE AND DURABILITY: PAST, PRESENT, AND FUTURE WORK" ([HTTP://WWW.HUDUSER.ORG/PUBLICATIONS/DESTECH/MOISTDURABILITY.HTML](http://www.huduser.org/publications/destech/MoistDurability.html)) RECOMMENDED A NUMBER OF RESEARCH PROJECTS, INCLUDING A FIELD STUDY OF RESIDENTIAL MOISTURE LOADS/SOURCES AND THE MAJOR FACTORS AFFECTING

THESE. PD&R, IN COOPERATION WITH THE OFFICE OF HEALTHY HOMES AND LEAD HAZARD CONTROL, HAS CONTRACTED WITH STEVEN WINTER ASSOCIATES TO CONDUCT A RESIDENTIAL MOISTURE STUDY IN SINGLE FAMILY DETACHED HOMES.

THE RESULTS OF THIS PROJECT SHOULD AID EFFORTS UNDERWAY BY THE ASHRAE STANDARD COMMITTEE 160P ON "DESIGN CRITERIA FOR PREVENTING MOISTURE DAMAGE IN BUILDINGS." BY EFFECTIVELY DESIGNING TO CONTROL MOISTURE IN HOMES, THE SUBSEQUENT DEVELOPMENT OF MOISTURE RELATED PROBLEMS (INCLUDING MOLD) SHOULD LARGELY BE ADDRESSED. THE MAJOR OBJECTIVES OF THE STUDY INCLUDE:

1. GENERATE INTERIOR AND EXTERIOR MOISTURE LOADS FOR A SAMPLE OF TEST HOMES IN DIFFERENT CLIMATIC REGIONS THROUGH FIELD MEASUREMENTS AND DATA MONITORING.
2. PERFORM AN IN DEPTH ANALYSIS OF THE FIELD DATA.
3. REPORT THE FINDING TO THE RESEARCH COMMUNITY.

4.4-GUIDANCE ON THE REHABILITATION/RECONSTRUCTION OF FLOOD-DAMAGED HOMES (POC: MIKE BLANFORD, HUD/PD&R, 202.402.5728)

THIS GUIDANCE WILL PROVIDE BUILDERS AND REMODELING CONTRACTORS WITH BEST PRACTICES CONCERNING THE REPAIRING AND RECONSTRUCTING FLOOD-DAMAGED HOMES. THE GUIDANCE WILL ADDRESS BOTH THE PRE-CONSTRUCTION AND THE CONSTRUCTION PHASES OF THE REHAB PROCESS. BECAUSE THE BUILDER OR REMODELING CONTRACTOR IS OFTEN NOT PERFORMING THE DRYING, MATERIAL REMOVAL, AND CLEANING OF THE HOME, A CHECKLIST WILL BE CREATED THAT COULD BE USED BY THE BUILDER TO ENSURE THAT HOME HAS BEEN PROPERLY PREPARED FOR RECONSTRUCTION. THE GUIDANCE WILL ALSO PROVIDE A SUMMARY OF MOISTURE RESISTANT CONSTRUCTION BEST PRACTICES AND WILL IDENTIFY MOISTURE RESISTANT BUILDING MATERIALS THAT WOULD BE APPROPRIATE FOR POST FLOOD RECONSTRUCTION.

THE COMPLETED GUIDANCE WILL CONSIST OF AN EASY TO USE, COMPREHENSIVE RECONSTRUCTION BEST PRACTICE GUIDE THAT WILL LEAD A BUILDER OR REMODELING CONTRACTOR FROM THE END OF THE CLEAN-UP PHASE, THOROUGH MATERIAL SELECTION AND DESIGN, TO RECONSTRUCTION OF A HOME THAT HAS BEEN FLOOD-DAMAGED (THE GUIDANCE WILL BE PRODUCED IN BOTH ENGLISH AND SPANISH). MAJOR OBJECTIVES OF THIS WORK ARE TO:

1. LIST THE CONDITIONS NECESSARY BEFORE REBUILDING A FLOOD-DAMAGED HOME.
2. IDENTIFY BEST PRACTICES IN MOISTURE RESISTANT CONSTRUCTION THAT ARE ESPECIALLY IMPORTANT WHEN REHABbing FLOOD-DAMAGED HOMES.
3. CATEGORIZE MOISTURE RESISTANT BUILDING MATERIALS THAT COULD BE USEFUL IN FLOOD-DAMAGED REHAB.
4. CREATE A TARGETED GUIDE FOR BUILDERS AND REMODELERS DOING REHAB AND RECONSTRUCTION WORK ON FLOOD-DAMAGED SINGLE-FAMILY HOMES.

5-GSA, GENERAL SERVICES ADMINISTRATION

(POC, DAVID MARCINIAK, 202-538-9029, DAVID.MARCINIAK@GSA.GOV)

INDOOR ENVIRONMENTAL QUALITY (IEQ) SUMMARY OF EFFORTS

5.1-SURVEYS

5.1.1-OCCUPANT SATISFACTION SURVEYS

APPROXIMATELY 8300 LOCATIONS

1/3 OF INVENTORY PER YEAR

APPROXIMATELY 50,000 *RETURNS* PER YEAR

QUESTIONS:

SUMMER TEMPERATURE,

WINTER TEMPERATURE,

VENTILATION, AND

AIR QUALITY

RATINGS NOT VERY GOOD - ONLY 49% RATE AS A "4" OR "5" (A "3" IS NEUTRAL)

5.1.2-IAQ SURVEYS

GENERALLY IN RESPONSE TO COMPLAINTS

GSA DESIRES BROADER PORTFOLIO KNOWLEDGE

ATTEMPT TO ROUGHLY CORRELATE WITH SATISFACTION SURVEYS

TEMPORALLY *AND SPATIALLY* DISTRIBUTED, I.E. DISTRIBUTED DATA LOGGERS

5.1.3-HVAC SYSTEM SURVEYS / BUILDING ATTRIBUTES

CHARACTERISTICS OF GOOD AND BAD PERFORMERS

HVAC SYSTEM TYPES AND DESIGNS

OPERATIONS AND MAINTENANCE HISTORY

5.2-RESPONSE

INVESTIGATING MOBILE SYSTEMS

RAPID DISPATCH

REAL-TIME REPORTING

REMOTELY OPERATED

5.3-RESEARCH

5.3.1-WEB-BASED OCCUPANT SATISFACTION SURVEYS

(UNIV. CAL AT BERKELEY, CENTER FOR THE BUILT ENVIRONMENT (CBE))

THIS IS A GENERAL IEQ SATISFACTION SURVEY. GSA CONDUCTED THE WEB-BASED SURVEY AND ONLINE REPORTING IN APPROXIMATELY 100 DELEGATED BUILDINGS AS PART OF GSA'S FACILITY MANAGEMENT EFFORT. PROJECT WILL CONVERT THE PAPER-BASED WORK PLACE 20*20 POST OCCUPANCY WORKPLACE SURVEY INTO CBE'S WEB-BASED FORMAT, WITH ACCOMPANYING REPORTING.

5.3.2-ENVIRONMENTAL QUALITY REPORTING (EQR).(CARNEGIE-MELLON UNIV.)

ON-SITE PHYSICAL MEASUREMENT OF ACOUSTIC, AIR QUALITY, LIGHTING AND THERMAL CONDITIONS IN ACCORDANCE WITH PUBLISHED STANDARDS. PROVIDES A SNAPSHOT OF THE CURRENT WORKPLACE ENVIRONMENT IN FEDERAL BUILDINGS; PROVIDES RECOMMENDATIONS OF WORKPLACE IMPROVEMENT TO ACHIEVE GOAL OF INCREASED FEDERAL EMPLOYEE SATISFACTION AND RETENTION. IDENTIFIES PRACTICES AND METHODS OF WORKPLACE DESIGN THAT ENHANCE OCCUPANT SATISFACTION. RESULTS FROM ALL SITES COMPILED INTO A CENTRAL DATABASE ENABLING ANALYSIS OF CROSS-PROJECT TRENDS AND CONCLUSIONS ABOUT ENVIRONMENTAL CONDITIONS IN FEDERAL WORKPLACES.

EQR RESULTS WILL ALSO LINK TO A REAL-TIME OCCUPANT SATISFACTION SURVEY.

5.3.3-HEALTHY BUILDING INTERVENTION STUDY.

(LAWRENCE BERKELEY NATIONAL LABORATORY)

GSA HAS IMPLEMENTED A NUMBER OF HVAC TECHNOLOGIES AND BUILDING OPERATION STRATEGIES DESIGNED TO PROVIDE ENHANCED AIR QUALITY AND/OR REDUCE ENERGY USE. THESE STRATEGIES INCLUDE ACTIVE MONITORING OF BUILDING VENTILATION, OZONE CONTROL, UV IRRADIATION OF COOLING COILS, AND PARTICULATE FILTRATION. HOWEVER, NO SYSTEMATIC STUDY OF THESE TECHNOLOGIES HAS BEEN UNDERTAKEN TO VERIFY THE ECONOMIC BENEFIT OF THESE STRATEGIES—EITHER IN TERMS OF IMPROVED OCCUPANT HEALTH, SATISFACTION AND PRODUCTIVITY, OR IN TERMS OF REDUCED BUILDING ENERGY USE.

5.3.4-UNDERFLOOR AIR DISTRIBUTION (UFAD)

GSA IS AGGRESSIVELY RESEARCHING AND APPLYING THIS TECHNOLOGY TO NEW CONSTRUCTION PROJECTS. UFAD SYSTEMS CAN INCREASE VENTILATION EFFECTIVENESS AND IMPROVE THERMAL COMFORT WITH REDUCED ENERGY COSTS. GSA IS WORKING WITH ASHRAE TO DEVELOP SOLUTIONS FOR SYSTEM INSTALLATION ISSUES WHICH CURRENTLY LIMIT UFAD APPLICATION AND EFFECTIVENESS.

5.3.5-SAN FRANCISCO FEDERAL BUILDING POST OCCUPANCY EVALUATION (POE)

GSA WILL BE CONDUCTING THE POE WITH AN EMPHASIS ON NATURAL VENTILATION AND DAY-LIGHTING DESIGNED INTO THE PROJECT.

5.3.6-COURTROOM LIGHTING CRITERIA STUDY (NIBS)

GSA IS INVESTIGATING FACTORS BEYOND BASIC ILLUMINATION LEVELS INCLUDING GLARE, CONTRASTING, REFLECTION AND DAY-LIGHTING.

5.3.7-ACOUSTICS RESEARCH

GSA HAS ON-GOING AND PLANNED RESEARCH IN THE AREAS OF SPEECH PRIVACY AND ACOUSTIC SIMULATION.

5.3.8-ADVANCED BUILDING SYSTEM INTEGRATION CONSORTIUM (ABSIC)

GSA CONTINUES TO PARTICIPATE IN THE CARNEGIE-MELLON HOSTED ABSIC.

5.4-DESIGN

GSA IS CURRENTLY REVISING ITS FACILITIES STANDARD FOR PUBLIC BUILDINGS INCLUDING IEQ PROVISIONS. A "HEALTH AND SAFETY IN BUILDING DESIGN" PROJECT HAS BEEN PROPOSED TO THE OSHA FEDERAL ADVISORY COUNCIL ON OCCUPATIONAL SAFETY AND HEALTH.

6-EPA, ENVIRONMENTAL PROTECTION AGENCY

(POC: PHIL JALBERT, 202-343-9431, JALBERT.PHILIP@EPA.GOV)

6.1-TOOLS FOR SCHOOLS (TFS)

- IAQ TFS NATIONAL SYMPOSIUM WAS HELD IN DECEMBER. THE SYMPOSIUM IS A TRAINING, NETWORKING, & RECOGNITION EVENT FOR SCHOOL-BASED INDIVIDUALS FROM ACROSS THE U.S.

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- THE SYMPOSIUM'S PURPOSE IS TO GIVE NATIONAL IAQ EXPERTS AND SCHOOL PERSONNEL THE OPPORTUNITY OF SOLVING PROBLEMS TOGETHER.
- THE SYMPOSIUM GIVES SCHOOL PERSONNEL:
 - (1) THE TECHNICAL RESOURCES FOR UNDERSTANDING IAQ MANAGEMENT,
 - (2) THE OPPORTUNITY TO NETWORK AND LEARN FROM AWARD-WINNING SCHOOLS USING SUCCESSFUL, FIELD-TESTED IAQ STRATEGIES.
- IN DECEMBER 500+ PEOPLE ATTENDED THE SYMPOSIUM, INCLUDING:
 - (1) SCHOOL SUPERINTENDENTS,
 - (2) BUSINESS OFFICIALS,
 - (3) SCHOOL FACILITY MANAGERS,
 - (4) OPERATIONS AND MAINTENANCE STAFF,
 - (5) SCHOOL NURSES, TEACHERS, AND HEALTH OFFICIALS, AND
 - (6) PARENTS AND STUDENTS.
- OUR THANKS TO:
 - (1) THE LAWRENCE BERKLEY NATIONAL LABORATORY FOR PARTICIPATING IN THE PLENARY PANEL DISCUSSION ON THE LATEST RESEARCH REGARDING IAQ IN SCHOOLS, AND
 - (2) OUR COLLEAGUES AT HHS/CDC WHO LED THE POPULAR "ASTHMA-FRIENDLY SCHOOLS" BREAKOUT SESSION.

6.2-ASTHMA FORUM

- EPA WILL HOST THE SECOND NATIONAL ASTHMA FORUM: *COMMUNITIES IN ACTION FOR ASTHMA-FRIENDLY ENVIRONMENTS* (MAY 31-JUNE 1, 2007, WASHINGTON, DC).
- THE NATIONAL ASTHMA FORUM BRINGS TOGETHER COMMUNITY ASTHMA COALITIONS AND SUPPORTING ORGANIZATIONS TO FACILITATE LEARNING AND ACCELERATE ACTION TO DELIVER HIGH QUALITY, COMPREHENSIVE ASTHMA CARE.
- THE NATIONAL ASTHMA FORUM IS THE PREMIER ANNUAL EVENT FOR THE EPA ASTHMA PROGRAM.
- FORUM PARTICIPANTS LEARN HOW TO CULTIVATE COMMITTED PROGRAM LEADERS, FOSTER STRONG COMMUNITY TIES, MAXIMIZE THE EFFECTIVENESS OF COLLABORATIONS, DELIVER INTEGRATED HEALTH CARE SERVICES, IMPLEMENT TAILORED ENVIRONMENTAL INTERVENTIONS, MEASURE RESULTS, AND BUILD SUSTAINABLE ASTHMA MANAGEMENT PROGRAMS IN THEIR COMMUNITIES.
- AT THE FORUM, EPA SEEKS TO EDUCATE AND MOTIVATE LEADERS FROM ACROSS THE COUNTRY TO JOIN IN A NATIONWIDE NETWORK OF COMMUNITIES WORKING TOGETHER TO ACHIEVE NATIONAL ASTHMA MANAGEMENT GOALS.
- ABOUT 350 PEOPLE WILL ATTEND THE 2007 FORUM, REPRESENTING:

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- (1) STATE HEALTH DEPARTMENTS,
- (2) HEALTH CARE INSURERS,
- (3) HEALTH CARE PROVIDERS,
- (4) ADVOCACY ORGANIZATIONS, AND
- (5) COMMUNITY-BASED ASTHMA CARE PROGRAMS.

EPA WANTS TO EXTEND TO OUR FEDERAL PARTNERS THE OPPORTUNITY TO USE THE FORUM AS AN OPPORTUNITY TO HELP COMMUNITIES WITH WHOM YOU ARE WORKING TO ACCELERATE THEIR PROGRESS IN DELIVERING EFFECTIVE, QUALITY ASTHMA CARE.

PLEASE INVITE THOSE KINDS OF LEADERS WITH WHOM YOU ARE WORKING TO PARTICIPATE IN THIS YEAR'S FORUM, MAY 31-JUNE 1 AT THE GRAND HYATT HOTEL AT METRO CENTER HERE IN DC. THE FORUM AGENDA AND REGISTRATION INFORMATION IS AVAILABLE AT WWW.EPAASTHMAFORUM.COM.

6.3-NATIONAL RADON ACTION MONTH (JANUARY)

EPA AND ITS MANY PARTNERS JUST COMPLETED A VERY SUCCESSFUL RADON ACTION MONTH, WITH A WIDE VARIETY OF ACTIVITIES PROMOTING RADON TESTING, AND RISK REDUCTION IN NEW AND EXISTING HOMES AROUND THE COUNTRY. YOU CAN VIEW THESE ACTIVITIES IN MORE DETAIL ON OUR RADON WEBSITE AND ON OUR STATE-BASED WEBPAGE WHICH WAS DESIGNED SPECIFICALLY FOR RADON ACTION MONTH, FOR DETAILS VISIT [HTTP://WWW.EPA.GOV/RADON/RNACTIONMONTH.HTML](http://WWW.EPA.GOV/RADON/RNACTIONMONTH.HTML).

FOR JANUARY EPA ALSO RELEASED A NEW FULL SCALE PUBLIC SERVICE CAMPAIGN (TV, RADIO, PRINT) IN ENGLISH & SPANISH UTILIZING THE U.S. SURGEON GENERAL'S RECENT RADON WARNING. YOU CAN VIEW THE CAMPAIGN AT [HTTP://WWW.EPA.GOV/RADON/RNPSA.HTML](http://WWW.EPA.GOV/RADON/RNPSA.HTML).

6.4-CDC HEALTHY HOUSING CALL TO ACTION

THE CENTERS FOR DISEASE CONTROL AND PREVENTION (CDC) IS LEADING AN AMBITIOUS UNDERTAKING TO PRODUCE A *SURGEON GENERAL'S CALL TO ACTION FOR HEALTHY HOUSING*. A FEDERAL WORKGROUP WILL BE MEETING LATER THIS MONTH TO DISCUSS THE FRAMEWORK FOR THIS CALL TO ACTION. AT THIS POINT, A VERY COMPREHENSIVE APPROACH TO THE ISSUE IS CONTEMPLATED. IED'S DR. SUSAN CONRATH WILL BE REPRESENTING EPA (202-343-9389, CONRATH.SUSAN@EPA.GOV). IED KEEP THE COMMITTEE INFORMED ABOUT THE PROGRESS OF THIS INITIATIVE. (POC: Ms. ROCKIE RODRÍGUEZ (404-498-0387, RMRODRIGUEZ@CDC.GOV).

6.5-BUILDING IAQ GUIDANCE AND LABELING INITIATIVES:

6.5.1. HOMES – ENERGY STAR FOR HOMES INDOOR AIR PACKAGE (IAP): PILOT LABELING PROGRAM.

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THIS INITIATIVE WAS DEVELOPED TO RECOGNIZE HOMES EQUIPPED WITH A COMPREHENSIVE SET OF INDOOR AIR QUALITY (IAQ) FEATURES, TO ENCOURAGE THE HOME BUILDING INDUSTRY TO INCLUDE IAQ RISK REDUCTION IN THE HOMES THEY SELL. IT IS A VOLUNTARY INITIATIVE MODELED AFTER THE HIGHLY SUCCESSFUL ENERGY STAR PROGRAM FOR NEW HOMES. OVER THE LAST 10 YEARS, MORE THAN 700,000 NEW HOMES HAVE QUALIFIED FOR THE ENERGY STAR LABEL, EXCEEDING 10% MARKET SHARE, AND BECOMING THE FOUNDATION FOR MANY HOME PERFORMANCE INITIATIVES IN THE U.S.

THE NEW INDOOR AIR PACKAGE IS DESIGNED TO HELP BUILDERS TAKE THE NEXT STEP IN IMPROVED HOME ENVIRONMENTS, BY SIGNIFICANTLY REDUCING RISKS ASSOCIATED WITH IAQ PROBLEMS. THE IAP TECHNICAL SPECIFICATIONS WERE DEVELOPED WITH SIGNIFICANT INPUT FROM INDUSTRY AND HOME PERFORMANCE EXPERTS, BASED ON BEST AVAILABLE SCIENCE AND IAQ INFORMATION, AND BALANCED WITH PRACTICAL ISSUES OF COST, BUILDER PRODUCTION PROCESS COMPATIBILITY, AND ENFORCEABILITY. HOMES THAT COMPLY WITH THESE SPECIFICATIONS CAN USE "INDOOR AIR PACKAGE" AS A COMPLEMENTARY LABEL TO ENERGY STAR FOR HOMES. ONLY ENERGY STAR QUALIFIED HOMES ARE ELIGIBLE FOR THIS LABEL.

EPA HAS COMPLETED THE FIRST PHASE OF THE PILOT PROGRAM, LABELING 7 HOMES IN DENVER, CO DURING 2006. THE PROGRAM IS NOW BEING REFINED BASED ON THE LESSONS LEARNED DURING THE PILOT, INCLUDING REVISIONS TO THE SPECIFICATIONS AND DEVELOPMENT OF MARKETING AND SALES MATERIALS FOR PARTICIPATING BUILDERS. EPA PLANS TO COMPLETE REVISIONS TO THE IAP SPECIFICATIONS IN MARCH 2007 AND IS CURRENTLY SEEKING EXPERT REVIEW OF DRAFT REVISIONS. THE REVISED IAP SPECIFICATIONS WILL BE USED DURING PILOT EXPANSION IN 2007, AFTER WHICH EPA HOPES TO MAKE FINAL PROGRAM CHANGES FOR FULL SCALE NATIONAL DELIVERY IN 2008.

MORE INFO AVAILABLE AT: [HTTP://WWW.ENERGYSTAR.GOV/HOMES](http://www.energystar.gov/homes) THEN CLICK "INDOOR AIR PACKAGE", OR CONTACT, ERIC WERLING, WERLING.ERIC@EPA.GOV, 202-343-9495.

6.5.2-PUBLIC AND COMMERCIAL BUILDINGS

6.5.2.1-EPA MOISTURE CONTROL GUIDANCE FOR PUBLIC AND COMMERCIAL BUILDINGS.

THIS GUIDANCE WAS DEVELOPED BY EPA TO PROVIDE PRACTICAL, "HOW-TO" GUIDANCE AND INFORMATION FOR DESIGNERS, CONSTRUCTION TRADES, AND FACILITY MANAGERS ON CONTROLLING MOISTURE IN NON-RESIDENTIAL BUILDINGS. SUCH GUIDANCE IS A CRITICAL INFORMATION GAP FOR BUILDING PROFESSIONALS, WHICH IS PARTICULARLY NOTICEABLE IN THE RAPIDLY GROWING GREEN BUILDING MOVEMENT. GREEN BUILDING RATING SYSTEMS DO NOT ADDRESS THE TOPIC ADEQUATELY. A DRAFT OF THE EPA DOCUMENT WAS RELEASED FOR PUBLIC REVIEW IN DECEMBER. ALTHOUGH THE PUBLIC COMMENT PERIOD OFFICIALLY CLOSED, IT CAN STILL BE REVIEWED DURING THE PERIOD WHILE WE ARE ADDRESSING COMMENTS RECEIVED.

TO ACCESS AND COMMENT ON THE DRAFT GUIDANCE, GO TO THE FOLLOWING WEBSITE, USING THE USERID AND PASSWORD BELOW, AND FOLLOW THE INSTRUCTIONS FOR REVIEWERS:

URL: [HTTP://WWW.CADMUSGROUP.COM/DEV/MOISTURECONTROL/SPLASH.HTML](http://www.cadmusgroup.com/dev/moisturecontrol/splash.html)

USER ID: CADMUSGUEST, PASSWORD: STEELHEAD*, FOR ADDITIONAL INFORMATION, CONTACT: ERIC WERLING, WERLING.ERIC@EPA.GOV, 202-343-9495.

6.5.2.2-ASHRAE ADVANCED IAQ DESIGN GUIDE (EPA FUNDED COOPERATIVE AGREEMENT)

BUILDING OWNERS AND DEVELOPERS, AND THE PROFESSIONALS THEY EMPLOY, HAVE GENERALLY ADDRESSED IAQ THROUGH COMPLIANCE WITH MINIMUM CODE REQUIREMENTS BASED ON INDUSTRY CONSENSUS STANDARDS SUCH AS ASHRAE STANDARD 62.1. WHILE THEY UNDERSTAND THE IMPORTANCE OF IAQ, THEY HAVE OFTEN ASSUMED THAT ACHIEVING “HIGH PERFORMANCE” IN THE AREA OF IAQ IS ASSOCIATED WITH ‘PREMIUM COSTS AND NOVEL OR EVEN RISKY TECHNICAL SOLUTIONS. A NEW ASHRAE PROJECT – THE ADVANCED IAQ DESIGN GUIDE – IS BEING DEVELOPED TO ADDRESS THESE ISSUES.

THE PROJECT WILL START WITH THE ASHRAE ENERGY DESIGN GUIDE MODEL AND WILL FOCUS ON DEVELOPING GUIDANCE AND SOLUTIONS THAT INTEGRATE VENTILATION, OCCUPANT COMFORT AND OTHER ASPECTS OF IAQ DESIGN AND BUILDING O&M TO MAKE HIGH PERFORMANCE ACCESSIBLE WITHOUT PREMIUM COSTS OR EXCESSIVE ENERGY CONSUMPTION, EPA IS FUNDING THIS ASHRAE PROJECT THROUGH A COOPERATIVE AGREEMENT, WITH THE PARTICIPATION OF EPA, ASHRAE, AIA, USGBC, SMACNA, AND BOMA, AND ADDITIONAL INPUT FROM A PROJECT COMMITTEE WHICH HAS NOT YET BEEN FORMED. FOR ADDITIONAL INFORMATION, CONTACT: ERIC WERLING, EPA PROJECT OFFICER, WERLING.ERIC@EPA.GOV, 202-343-9495, OR ANDY PERSILY, STEERING COMMITTEE CHAIR, ANDREW.PERSILY@NIST.GOV, 301-975-6418.

7-GENERAL CIAQ ITEMS

(POC: PHIL JALBERT, 202-343-9431, JALBERT.PHILIP@EPA.GOV)

FILTRATION WILL BE A DISCUSSION TOPIC AT THE JUNE 6TH MEETING. THE NCEMBT HAS PROPOSED PRESENTING ON, *REDUCED ENERGY USE THROUGH REDUCED INDOOR CONTAMINATION IN RESIDENTIAL BUILDINGS*, NOVEMBER 2006. THERE MAY BE OTHER PRESENTATIONS ALSO. IDEAS AND SUGGESTIONS ON THE SCOPE OF THE DISCUSSION AND ITS ORGANIZATION SHOULD BE DIRECTED TO PHIL JALBERT (JALBERT.PHILIP@EPA.GOV).

C- PRESENTATIONS

(PDF COPIES ARE ONLINE AT [HTTP://WWW.EPA.GOV/IAQ/CIAQ/MEETINGSCHEDULE.HTML](http://www.epa.gov/iaq/ciaq/meetingschedule.html))

(1) NIBS INDOOR ENVIRONMENTAL QUALITY REPORT. THE U.S. ACCESS BOARD CONTRACTED WITH THE NATIONAL INSTITUTE OF BUILDING SCIENCES (NIBS) TO DEVELOP AN IEQ REPORT ON THE FACTORS THAT LIMIT ACCESS TO BUILDINGS FOR INDIVIDUALS WITH SENSITIVITIES TO CHEMICALS AND ELECTROMAGNETIC FIELDS.

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A REPRESENTATIVE GROUP OF PROFESSIONALS, INCLUDING ARCHITECTS, ENGINEERS, PRODUCT SUPPLIERS AND MANUFACTURERS, HEALTHCARE SPECIALISTS, AND CONSUMER REPRESENTATIVES: (1) REPORTED ON CURRENT CONDITIONS; AND (2) RECOMMENDED WAYS TO LIMIT THE USE OF MATERIALS THAT LIMIT OR PROHIBIT ACCESS FOR SENSITIVE INDIVIDUALS. THE REPORT ADDRESSES: (1) OPERATIONS & MAINTENANCE; (2) DESIGN OF "CLEANER AIR ROOMS"; (3) DESIGN & CONSTRUCTION; AND (4) BUILDING PRODUCTS & MATERIALS. THE CIAQ PRESENTATION WILL BROADLY COVER THE ENTIRE REPORT, WITH A FOCUS ON BUILDING DESIGN, CONSTRUCTION, PRODUCTS, AND MATERIALS.

PRESENTER: NANNE DAVIS ELIOT, NIBS PROJECT MANAGER (202-289-7800, EXT.125, NELIOT@NIBS.ORG).

(2) NASA TO STRENGTHEN THE INDOOR HEALTH AND PRODUCTIVITY COMPONENT OF ITS "SUSTAINABILITY" COURSE FOR FACILITIES STAFF. NASA WILL PRESENT THE NATIONAL BUILDING INFORMATION MODEL STANDARD AND ITS CONSTRUCTION OPERATIONS BUILDING INFORMATION EXCHANGE COMPONENT. DISCUSSION WILL INCLUDE CHANGES IN THE UNIFIED FACILITIES GUIDE SPECIFICATIONS. THESE STANDARDS AND SPECIFICATIONS IMPACT UPON IAQ BECAUSE THEY ARE CONTRACTUAL REQUIREMENTS AND BUSINESS PRACTICES BY WHICH INFORMATION ESSENTIAL FOR PROPER O&M OF FACILITIES IS PASSED FROM THE DESIGNER, CONSTRUCTOR, AND MANUFACTURER TO THE OWNER, OPERATOR AND MAINTAINER. IT'S THE BEGINNING OF A REVOLUTION WITHIN THE BUILDING INDUSTRY WHICH CAN BE OF TREMENDOUS SUPPORT TO THOSE WITH INTEREST IN IHP/IEQ/IAQ.

PRESENTER: BILL BRODT, NASA FACILITIES ENGINEERING/REAL PROPERTY DIVISION, (202-358-1117, WBRODT@NASA.GOV).

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[HTTP://WWW.EPA.GOV/IAQ/CIAQ/INDEX.HTML](http://WWW.EPA.GOV/IAQ/CIAQ/INDEX.HTML), OR CONTACT PHILIP JALBERT, EPA INDOOR ENVIRONMENTS DIVISION (IED), OFFICE OF RADIATION AND INDOOR AIR ([CIAQ@EPA.GOV](mailto:CIAQ@EPA.GOV), 202.343.9431). MEETINGS ARE USUALLY HELD IN ROOM 152 OF EPA'S OFFICES AT 1310 L ST., NW, WASHINGTON, DC 20005-4113.

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